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# Looking Forward from Today's Marketplace

January 21, 2002

Steven Greenberg  
COO

RealEnergy, Inc.

[sgreenberg@realenergy.com](mailto:sgreenberg@realenergy.com)



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# Introduction

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- **Two forces driving the DG Market**
  - *Customer Needs*
  - *“Grid” Needs*
- **The Impact of Technology on Market Development**
- **Looking Forward from Today**
- **A Wish List**



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## Customer's Needs Drive DG Market Developments

Service	Financial	Social
<ul style="list-style-type: none"><li>• Reliability</li><li>• Power Quality</li></ul>	<ul style="list-style-type: none"><li>• Price</li><li>• Risk</li></ul>	<ul style="list-style-type: none"><li>• Environmental</li><li>• Competitive Advantage</li></ul>



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## **The Grid's Needs...**

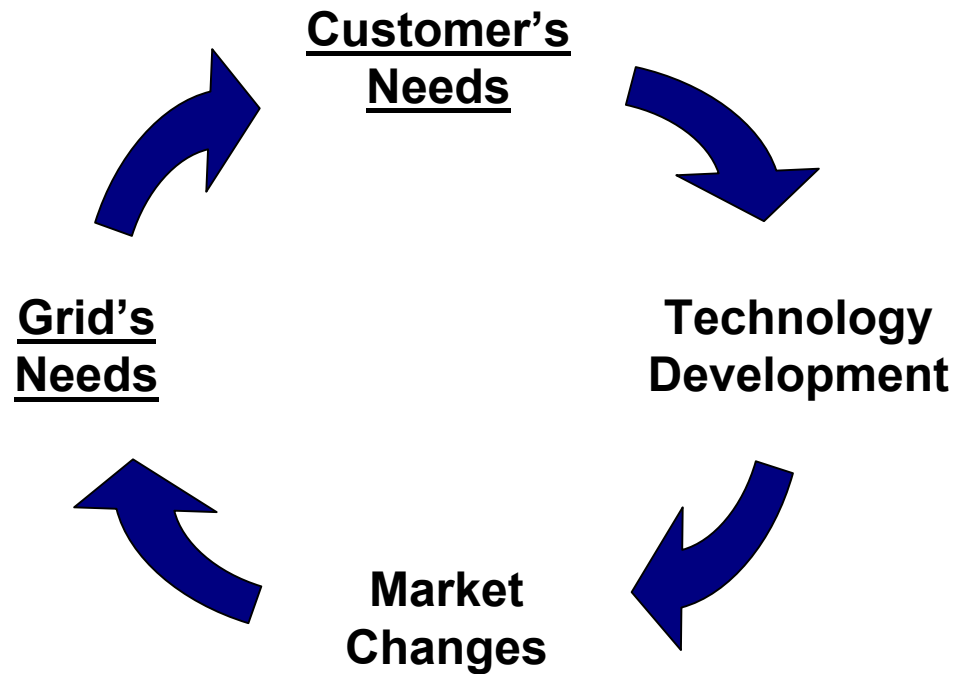
**(Also Define Customer's Needs)**

<b>Service</b>	<b>Financial</b>	<b>Social</b>
<ul style="list-style-type: none"><li>• Planning</li><li>• Congestion</li><li>• Power Quality</li><li>• Reliability</li></ul>	<ul style="list-style-type: none"><li>• Cost Recovery</li><li>• Operating Savings</li><li>• Capital Investment</li></ul>	<ul style="list-style-type: none"><li>• Environmental</li><li>• Safety</li><li>• Equity</li></ul>



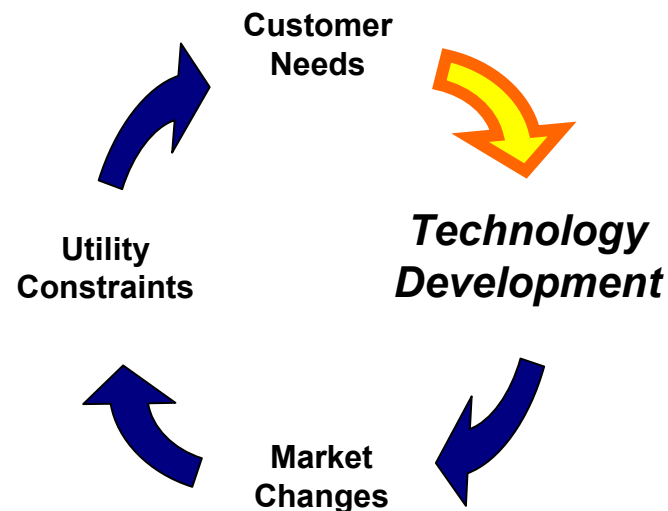
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**These two forces have been working together to spur technology and market development**



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**However, RealEnergy finds technology innovations – in response to customer demands – influencing future developments for DG.**



## **Recent Technological Innovations Include:**

- *Metering Devices / Controls*
- *Smaller, Cleaner, More Reliable and Efficient Prime-movers*



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# Recent Market Developments...In Part Driven by Technology Advancements

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- **FERC Standard Market Design**
  - *Demand Side Management Initiatives at the ISO's*
  - *Universal Participation in Market*
- **Reexamining of Older Rates and Tariffs**
  - *Demand Charges and Standby Fees*
  - *Net Metering*
- **Tradable Emissions**
  - *Recent Lieberman & McCain Bill*
- **Interconnection Rules**
  - *FERC's ANOPR*
  - *IEEE 1547*
  - *California's Rule 21*



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## Customer's Needs - Looking Forward from Today

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- ***Stable Market Transition***
- **More savvy electricity consumers**
  - *Customers will desire the bundling of “Services” based on a mix of potentially competing needs*
- **Technology / Firms that capitalize on new revenue streams**
  - *Tradable Emission Credits*
  - *Net Metering*
  - *Demand Side Management*
  - *Capacity Markets*
- **Increasing 3<sup>rd</sup> Party specialization**
- **Greater need for simplified interconnection**





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## Grid's Needs - Looking Forward from Today

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- **Stable Market Transition**
  - *Fair Cost Recovery for Previous Investments*
- **Investments that Improve the Transition & Distribution System**
  - *Capital projects that enable grid growth and address constraints*
  - *Improved Power Quality*
- **Social Concerns**
  - *Environmental Impacts*
  - *Safety*
  - *Equity*



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## Government Action – The Wish List

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1. **Facilitating a planned orderly market transition over a set number of years**
  - *Allows for certainty in private investment*
  - *Integrated approach to transition*
2. **Assessing and Addressing Barriers State by State**
  - *Rates and Tariffs*
  - *Interconnection Regulations and Requirements*
3. **Facilitating Technology Advancements**
  - *Single communications protocol for DG technologies*
  - *“Plug & Play” Interconnection Devices*
  - *Cleaner and More Fuel-Efficient Generators*
  - *Hybrid Systems*

